


C. Facilitated Transport / Facilitated Diffusion

some needed materials such as glucose are a bit too big to fit through the cell membrane like O_2 does

so instead they travel through the protein channels

once again no cellular energy is needed for this to occur

 <http://www.youtube.com/watch?v=JShwXBWGMYY>

2. Active transport

at times the cell must use some of its own energy to get things in and out

~~this can be compared to riding a bike up a hill - you'll get there but you'll use lots of energy.~~

There are 2 situations that require active transport

A. The movement of materials against the concentration gradient

In other words from a **low** concentration to a **high** concentration

~~The protein channels act as pumps to force materials in or out of the cell~~

~~this occurs for example in the kidney or after a nerve impulse passes along an axon~~

B. Active transport is also needed to move large materials in and out of the cell

Moving things in is called endocytosis

Moving things out is called exocytosis

If the particle is a solid its called phagocytosis

If the particle is a liquid droplet its called pinocytosis

 <http://www.youtube.com/watch?v=HndmASfmI8Y>

 <http://www.youtube.com/watch?v=4gLtk8Yc1Zc>